AMENDMENTS TO THE CLAIMS:

15. (currently amended) A method for manufacturing a light-emitting semiconductor device of Group III nitride compound semiconductor with p-type conduction, said method comprising:

providing a surface layer;

forming a multi-layered electrode layer comprising a first electrode layer formed on said surface layer and a second electrode layer formed on said first electrode layer, said first electrode layer comprising a material having an ionization potential lower than that of said second electrode layer and said second electrode layer comprising a material having an ohmic characteristic to said semiconductor better than that of said first electrode layer;

forming an electrode pad covering a portion of said second electrode layer and leaving another portion of said second electrode layer uncovered; [[and]]

moving an element of said first electrode layer to near a surface of said multi-layered electrode layer and penetrating an element of said second layer into said surface layer to be metallized with Group III nitride compound semiconductor as a reaction of said moving an element of said first electrode layer, by a heat treatment; and

~~providing a heat treatment so~~ making a distribution such that the portion of said material of said second electrode layer which is uncovered by said electrode pad is distributed more deeply into said surface layer than that of said first electrode layer and provides a contact resistance between said electrode layer and said surface layer lower than said portion covered with said electrode pad.

16. (original) A method according to claim 15, wherein said material of said first electrode layer includes at least one of nickel (Ni), iron (Fe), copper (Cu), chromium (Cr), tantalum (Ta), vanadium (V), manganese (Mn), aluminum (Al), and silver (Ag) and said material of said second electrode layer includes at least one of palladium (Pd), gold (Au), iridium (Ir), and platinum (Pt).

17. (currently amended) A method according to claim 15, wherein said material of said first electrode layer [[is]] comprises nickel (Ni) and said material of said second electrode layer [[is]] comprises gold (Au).

18. (original) A method according to claim 15, wherein said heat treatment is carried out in the range from about 400°C to 700°C.

19. (original) A method according to claim 15, wherein said Group III nitride compound semiconductor satisfies the formula $Al_xGa_yIn_{1-x-y}N$, wherein $0 \leq x \leq 1$, $0 \leq y \leq 1$, and $0 \leq x+y \leq 1$.

20. (previously presented) A method according to claim 15, wherein materials of said second electrode layer do not permeate into said first electrode layer immediately under said electrode pad, which enables the interface between said electrode and said semiconductor immediately under said electrode pad to have a predetermined large resistivity and not to have an electric current pass therethrough.

21. (currently amended) ~~A method according to claim 15, comprises:~~ A method for manufacturing a light-emitting semiconductor device of Group III nitride compound

semiconductor with p-type conduction, said method comprising:

providing a surface layer;

forming a multi-layered electrode layer comprising a first electrode layer formed on said surface layer and a second electrode layer formed on said first electrode layer, said first electrode layer comprising a material having ionization potential lower than that of said second electrode layer and said second electrode layer comprising a material having an ohmic characteristic to said semiconductor better than that of said first electrode layer;

forming an electrode pad covering a portion of said second electrode layer and leaving another portion of said second electrode layer uncovered by forming a first metal layer on said second electrode layer, forming a second metal layer on said first metal layer, and forming a third metal layer on said second metal layer;

providing a heat treatment so that the portion of said material of said second electrode layer which is uncovered by said electrode pad is distributed more deeply into said surface layer than that of said first electrode layer and provides a contact resistance between said electrode layer and said surface layer lower than said portion covered with said electrode pad; and

~~said method further comprising:~~

forming a protective film over said third metal layer, said protective film leaving exposed a central portion of said third metal layer;

wherein said second metal layer comprises gold (Au), said first metal layer comprises a material that has an ionization potential lower than gold (Au), and said third metal layer comprises a material that has an adhesiveness to said protection film which is stronger than gold (Au).

22. (currently amended) A method according to claim [[15]] 21, wherein said material of said first metal layer includes at least one of nickel (Ni), iron (Fe), copper (Cu), chromium (Cr), tantalum (Ta), vanadium (V), manganese (Mn), aluminum (Al), and silver (Ag).

23. (currently amended) A method according to claim [[15]] 21, wherein said material of said third metal layer includes at least one of aluminum (Al), nickel (Ni), and titanium (Ti).

24. (currently amended) A method according to claim [[15]] 21, wherein said protection film comprises silicon oxide (SiO_2).

25. (currently amended) A method according to claim [[15]] 21, wherein said material of said first metal layer comprises nickel (Ni) and said material of said third metal layer comprises aluminum (Al).

26. (currently amended) A method according to claim [[15]] 21, wherein said heat treatment is carried out in an atmosphere comprising oxide (O_2).

27. (new) A method for manufacturing a light-emitting semiconductor device of Group III nitride compound semiconductor with p-type conduction, said method comprising:

selecting an element of a first electrode layer having an ionization potential that is lower that that of an element of a second electrode layer;

selecting said element of said second electrode layer having better ohmic contact to said Group III nitride compound semiconductor than said element of said first electrode layer;

providing a surface layer;

forming a multi-layered electrode layer comprising said first electrode layer formed on said surface layer and said second electrode layer formed on said first electrode layer, said first electrode layer comprising a material having an ionization potential lower than that of said second electrode layer and said second electrode layer comprising a material having an ohmic characteristic to said semiconductor better than that of said first electrode layer;

forming an electrode pad covering a portion of said second electrode layer and leaving another portion of said second electrode layer uncovered; and

providing a heat treatment so that the portion of said material of said second electrode layer which is uncovered by said electrode pad is distributed more deeply into said surface layer than that of said first electrode layer and provides a contact resistance between said electrode layer and said surface layer lower than said portion covered with said electrode pad.

28. (new) A method according to claim 15, wherein said heat treatment is carried out in an atmosphere comprising oxide (O_2).

29. (new) A method according to claim 27, wherein said heat treatment is carried out in an atmosphere comprising oxide (O_2).

30. (new) A method according to claim 15, wherein a thickness of said first electrode layer is from 5Å to 200Å.

31. (new) A method according to claim 15, wherein a thickness of said second electrode layer is from 5Å to 200Å.

32. (new) A method according to claim 27, wherein a thickness of said first electrode layer is from 5Å to 200Å.

33. (new) A method according to claim 27, wherein a thickness of said second electrode layer is from 5Å to 200Å.